



What are the PPE interoperability and compatibility (I&C) challenges faced by workers as they perform their work tasks?

- **Creating interfacing, interconnecting elements**
- **Variability and impact of field use on protection – whether it is different conditions, differing tasks or differing chemicals**
- **Maintaining minimum performance requirements for the entire lifecycle**
- **You need responsible purchasing and responsible sales.**
- **All three examples (law enforcement, fire, construction) have integration issues. The question is how do we solve them?**



What are the issues that federal regulations and consensus standards development organizations should emphasize in addressing these challenges and establishing applicable standards?

- **What organization has authorization to develop the integrated PPE standards?**
- **Who will coordinate development of new technologies for which there are no standards yet available?**
- **The need for improved and integrated standards:**
 - **Task- and hazard-specific standards**
 - **Harmonizing the standard with the risk for the user in each phase – integrate user input into the total standard development process.**
 - **Alignment of conformance of standards with international requirements**



What are the issues that federal regulations and consensus standards development organizations should emphasize in addressing these challenges and establishing applicable standards?

(continued)

- Need for more streamlined process, such as between MSHA and NIOSH
- Who takes overall responsibility for system integration?
- Liability issues



What are the issues faced by PPE manufacturers related to product certification and design considerations for I&C?

- Need for incentives (subsidies, etc) to compensate for small market size.
- Need for more cost-effective testing where multiple components come together
- Need to provide guidance regarding usable life cycle of PPE
- Follow DOJ standard as a model for integration of PPE
- If you are going to have an integrated system, you need certification, infrastructure and resources in place to get products to market.
- Access to market driven resources information
- Need partnership consensus between manufactures and users to develop the proposal rules to create the standards



Are there very near-term things that can be done to effect almost immediate improvements as to I&C issues?

- The need for cost effective field testing that can give real-time information on user interface and improvement in PPE
- Better and standardized labeling needed due to users' lack of PPE protection programs
- Sharing information to achieve integration and inter-compatibility
- Find most current draft of the standards integration proposal and make it available to the public



What are the two or three most important things that NIOSH should do to support this issue?

- **NIOSH provide clear information**
 - for verification of certification of manufacturers
 - for end-users to choose the proper product and use it properly.
- **Collect information from users and put out a series of case studies that people can learn from.**
- **Build general industry standards and then modify with specifics over time.**
- **NIOSH develop partnerships with stakeholders to understand interface and publish the results.**